

Radionuclides in the Dust Storm Particles on Eastern and Central Areas of Saudi Arabia

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Dust particles can transfer radioactive nuclides close to populated areas, which contribute to urban air pollution and threaten the public health. In addition, this can be one of the main environmental impacts of radioactive exposure to human beings. Violent wind and dust storms are common in Saudi Arabia. For instance, on July 2009, a dust storm stretched from Iraq into the north eastern and the central areas of the kingdom. The present study reports the dust particles that were collected during and after this storm in five different locations using air filters. The measurements were carried out using a HPGe gamma spectrometry system for investigating the activity concentrations of ^{226}Ra , ^{228}Ra , ^{235}U , ^{238}U , and ^{40}K . The results were compared with the background readings for the same locations that were performed before.